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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/006,384	12/10/2001	Akio Oobayashi	109809	8263

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EXAMINER

KNABLE, GEOFFREY L

ART UNIT PAPER NUMBER

1733

DATE MAILED: 04/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/006,384

Applicant(s)

OOBAYASHI ET AL.

Examiner

Geoffrey L. Knable

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 February 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2 and 5-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,2 and 8 is/are allowed.
- 6) ☒ Claim(s) 5-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 1733

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2-7-2005 has been entered.

2. Claims 1, 5 and 8 are objected to because of the following informalities:

In each of claims 1, 5 and 8, the added word "toroidal" is misspelled - there should be only one "r".

Appropriate correction is required.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitamura (US 6,620,367) taken in view of [Laurent et al. (US 5,853,526) and/or Galleithner et al. (US 3,864,189)] and [Brown (US 1,612,565) or Mattson (US 4,861,253)].

These references are applied herein for substantially the same reasons as set forth in the last office action. The new requirement in claim 5 for preliminarily inflating "the bladder and green tire into a toroidal shape" is considered, particularly when this language is read in light of the original disclosure, to be entirely consistent with the preliminary inflation that occurs for example in the step illustrated in fig. 4 of Mitamura. In particular, it first must be stressed this new claim language has **not** been read to

Art Unit: 1733

define or require that the green tire is not already in a toroidal form prior to this inflation step - in other words, the original disclosure would have been read as clearly consistent with the green tire being already shaped into a toroidal form (as is of course the well known and typical tire shape leaving the tire building process) prior to being conveyed to the preprocessing machine, the bladder being inflated within the green tire. While there certainly could be some additional shaping during preprocessing to bring the tire to a shape more closely approximating the final tire shape (in the mold), claim 5 is considered to require no more than that the bladder is inflated to within the green tire, the assembly being in a toroidal shape after inflation. Thus, although the green tire in Mitamura is already in what is conventionally termed a "toroidal shape" prior to preliminary inflation, the described preliminary inflation inflates the bladder and green tire, the assembly being in a toroidal shape after this inflation, this being considered consistent with the claims. It should also be noted that even if one were to read this claim 5 requirement as requiring that there be additional shaping of the tire itself in this step, Mitamura expressly describes the preprocessing step as effecting not just preheating but also "shaping thereto" - e.g. col. 10, lines 1-5.

It should also be noted that with the amendment to claim 5, line 12, there is no longer any express claim requirement for circulating or heating and/or cooling the liquid *in the preprocessing machine*. Thus although it is still considered to have been obvious to circulate a heated fluid/liquid through a preprocessing machine for reasons set forth in the last office action, claim 5 is now also entirely consistent with the liquid circulation and heating being that required to *vulcanize the tire*, it again being well known and

Art Unit: 1733

conventional in this art to utilize heated water, the water being maintained heated by circulation, in a tire to effect tire vulcanization, Brown and Mattson (as well as Laurent) providing ample evidence in support thereof. It should additionally be noted that Mitamura, although not expressly describing a liquid, would not have been read as expressly limited to or inconsistent with any particular type of inflation medium - note for example the reference to a "heating medium" in claim 1 of the patent.

5. Claims 1, 2 and 8 are allowed.

These claims are allowed for generally the reasons advanced by applicant in the remarks accompanying the 2-7-2005 amendment, taken with the following additional comments. In particular, in previously applied EP 578,106, it is noted that the supports 6, 7 for the bead portions in this reference are separate and distinct elements from the clamping elements 20 for the bladder, this being contrary to the requirement in claims 1 and 8 for the structure and function of the claimed "holders". Additionally, Mitamura (US 6,620,367), although it suggests transferring a preliminarily inflated tire (albeit without a specific teaching of liquid for this inflation) among various positions, suggests removal of the tire from the bladder prior to post cure inflation (e.g. col. 12, lines 56-67) and therefore would not teach or render obvious a method/apparatus as claimed including transferring the vulcanized tire together with the holders and bladder from the vulcanizer to a post cure inflator with rotation and supply of low temperature liquid into the bladder as claimed.

6. Applicant's arguments filed 2-7-2005 have been fully considered but they are not persuasive, at least as regards the remaining rejection.

With respect to the 35 USC 112, first paragraph rejections, these have been withdrawn in light of the amendments to the claims, it being noted however that to the extent applicant is urging that claim 5 previously should have been read to not require that the means for heating and/or cooling is in reference to the liquid in the preprocessing machine (applicant urging on page 5 that “the Office Action inappropriately separates individual portions of the claim language”), such an argument is unconvincing and not consistent with the previous claim language. This however is now moot with the removal of “the” before “liquid” in line 12 of claim 5, this removing the linkage that previously existed in the claim and thus claim 5 as now presented is consistent with applicant’s arguments.

Applicant’s comments that the previous office action was improper because it was “very generally stated” and that the arguments, such as that Mitamura did not disclose heating and/or cooling the circulated liquid, were not addressed, are noted. However, again, these features represented entirely new features of the claims which were addressed with the citation and detailed discussion of five newly cited/applied references, two of these references (Mattson and Brown) being specifically cited as evidence that the artisan would have understood circulation to be well known and desirable when heated water is being used to effect a desired tire treatment. It thus is respectfully submitted that applicant’s previous arguments were all substantively addressed in detail by the new citation and application of the new references.

As to these secondary references, it is first argued that Laurent only suggests liquid at a vulcanization station and that Galleithner et al. does not inflate a bladder and

Art Unit: 1733

green tire to toroidal shape. These arguments have been carefully considered but are unpersuasive of the non-obviousness of the invention. As to Laurent, it is not considered to be accurate to read Laurent as expressly suggesting liquid for only the vulcanization. Rather, it would seem from the express indication that:

“As the case may be, said connecting sockets may be either electric inlets or connectors for gaseous or liquid fluid. Due to the sealing means between plates, it offers the possibility of providing an autonomous inflated support which can be transported in inflated state from station to station during the assembling of the tire, without it being necessary to connect it each time to a source providing a fluid under pressure” (col. 3, lines 17-24).

that the “fluid under pressure” would be read as being in reference to the “gaseous or liquid fluid” that the module is capable of accepting. Further, as to Galleithner et al., although this reference does use the liquid to effect the shaping that actually is used to form the final toroidal green tire, it clearly provide evidence that the artisan would have appreciated that liquid can suitably be used as an inflation medium for the normal toroidal shaping process to form the green tire - i.e. that liquid is known to be suitable for internal tire support/tire shaping beyond simply during vulcanization. Thus, again, since it is known to use a liquid to inflate a bladder to toroidal shape both before vulcanization (e.g. in tire building/assembling as suggested by Galleithner et al. and also considered to have been suggested by Laurent as noted above) and during vulcanization (Laurent as well as Mattson and Brown), it is considered to have been obvious to utilize such for the preliminary inflation/heating, which will be maintained in the vulcanization press, as taught by Mitamura with a reasonable expectation of success. In other words, it is submitted that the ordinary artisan, recognizing that Mitamura is desiring to preliminarily perform some heating/shaping prior to insertion in

Art Unit: 1733


the press to shorten cycle time in the press, this preliminary inflation being maintained when transferred to the press, and also recognizing the extremely well known use of a heated liquid to vulcanize a tire, would have found it obvious to effect this preliminary inflation (as well as the vulcanization) using a liquid with a reasonable expectation of successfully being able to shape/cure a tire for only the expected results.

The arguments with respect to EP '106 to Bridgestone are moot as all rejections including this reference have been withdrawn.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey L. Knable whose telephone number is 571-272-1220. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on 571-272-1156. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Geoffrey L. Knable  
Primary Examiner  
Art Unit 1733

G. Knable  
April 14, 2005